IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A drum type washing machine comprising:

a tub of plastic having a wall portion for holding washing water and securing a driving unit thereto, and a front side sloped upward at a predetermined angle from ground;

a drum rotatably mounted in the tub;

a hollow drum shaft passed through the tub, and connected to the drum inside of the tub for transmission of driving power from a motor to the drum;

at least one bearing for supporting the hollow drum shaft;

a stator fixedly secured to the rear wall portion of the tub;

a rotor connected to a rear end of the drum shaft to constitute a motor together with the stator;

a pulsator rotatably mounted in the drum;

a pulsator shaft mounted to pass through the hollow [[of the]] drum shaft, having a fore end connected to the pulsator; and

a pulsator control means for braking/releasing rotation ~~of the rotation~~ of the pulsator,

wherein the pulsator control means includes;

a pulley in rear of the rotor connected to a rear end of the pulsator shaft, for controlling rotation of the pulsator, and

a braking device for controlling rotation of the pulsator in the drum by braking/releasing the pulley.

2. (Canceled)

3. (Currently Amended) The drum type washing machine as claimed in claim 1, wherein the pulsator shaft is supported on ~~oiless~~ oilless bearings on a front side and a rear side thereof.

4. (Original) The drum type washing machine as claimed in claim 1, wherein the at least one bearing for supporting the hollow drum shaft includes one on a front side, and the other one on a rear side of the drum shaft.

5. (Currently Amended) The drum type washing machine as claimed in claim 4, wherein, of the bearings supporting the hollow drum shaft, the front side bearing of the drum shaft has a diameter greater [[grater]] than a diameter of the rear side bearing for minimizing vibration of the drum during spinning, and making strength higher.

6. (Original) The drum type washing machine as claimed in claim 4, further comprising a water seal in front of the front side bearing of the drum shaft, for preventing water from leaking.

7. (Original) The drum type washing machine as claimed in claim 6, wherein the water seal includes a spring mounted therein for compressing the water seal.

8. (Original) The drum type washing machine as claimed in claim 6, wherein an outside portion of the water seal is supported on a bearing housing, or a shape of the rear wall of the tub.

9. (Currently Amended) The drum type washing machine as claimed in claim 1 [[2]], wherein the braking device includes;

a solenoid secured to the tub,

a plunger moving back and forth in the solenoid, and

a compression spring in the solenoid for providing force to move the plunger forward,

so that the plunger brakes or releases the pulley depending on electric turn on/off of the solenoid, for braking/releasing rotation of the pulsator.

10. (Currently Amended) The drum type washing machine as claimed in claim 1 [[2]], wherein the braking device includes;

a solenoid secured to a cabinet which encloses the tub,

a plunger moving back and forth in the solenoid, and

a compression spring in the solenoid for providing force to move the plunger forward,

so that the plunger brakes or releases the pulley depending on electric turn on/off of the solenoid, for braking/releasing rotation of the pulsator.

11. (Original) The drum type washing machine as claimed in claim 1, further comprising a rotor bushing between the drum shaft and the rotor.

12. (Original) The drum type washing machine as claimed in claim 11, wherein the rotor bushing couples to the drum shaft and the rotor frame in a state the rotor bushing is positioned in rear, or front of a rotor frame.

13. (Original) The drum type washing machine as claimed in claim 12, wherein the rotor bushing includes;

an engagement portion at a center thereof for placing in, and engagement with the drum shaft, and

a coupling portion extended in a radial direction from a circumference of the engagement portion for coupling with the rotor frame.

14. (Original) The drum type washing machine as claimed in claim 13, wherein the coupling portion of the rotor bushing includes positioning projections projected toward the rotor frame as one body.

15.(Original) The drum type washing machine as claimed in claim 14, wherein the coupling portion of the rotor bushing includes fastening pass through holes for fastening to the rotor frame with bolts.

16. (Currently Amended) The drum type washing machine as claimed in claim 14, wherein the rotor bushing further includes a reinforcing rib which is provided at least one of the engagement portion or the coupling portion.

17. (Currently Amended) The drum type washing machine as claimed in claim 14, wherein the drum shaft includes a serration on an outside circumferential surface of a rear end portion of the drum shaft [[6]], and the rotor bushing includes a serration on an inside circumferential surface of a center of the engagement portion of the rotor bushing opposite to the serration of the drum shaft, for engagement with each other.

18. (Original) The drum type washing machine as claimed in claim 14, wherein the rotor bushing is formed of plastic.

19. (Currently Amended) The drum type washing machine as claimed in claim 1, further comprising:

a spider [[16]] secured the rear wall of the drum for supporting the rear wall of the drum and reinforcing the strength, and

a flange at a front end portion of the drum shaft in close contact with the spider, for fastening the drum rear wall, the spider, and the flange of the drum shaft with fastening members passed therethrough, together.

20. (Original) The drum type washing machine as claimed in claim 1, wherein the pulsator shaft includes serrations at opposite ends for engagement with the pulsator and the pulley.

21. (Original) The drum type washing machine as claimed in claim 20, wherein the serration includes an involute profile surface.

22. (Original) The drum type washing machine as claimed in claim 1, wherein the motor is a BLDC motor.

23. (Original) The drum type washing machine as claimed in claim 9, wherein the pulley includes;

a portion for covering the rear wall of the rotor frame,

a portion for covering a sidewall of the rotor frame,

an engagement portion at a center of the rear wall portion 15a for engagement with the pulsator shaft, and

a holding recess in the pulley at a portion covering the rotor frame for being held by the braking device.

24. (Original) The drum type washing machine as claimed in claim 23, wherein the engagement portion of the pulley includes a projected boss shape for placing, and being positioned inside of the rear end of the drum shaft in assembly.

25. (Canceled)

26. (Currently Amended) The drum type washing machine as claimed in claim 6 ~~25~~, wherein the drum shaft includes a surface plated with chrome for reducing wear, and friction, and enhancing corrosion resistance of the drum shaft.

27. (Original) The drum type washing machine as claimed in claim 26, wherein the chrome is plated at least on a surface sliding with the water seal or the like of the drum shaft.

28. (Original) The drum type washing machine as claimed in claim 6, wherein the drum shaft is formed of stainless steel for reducing wear, and friction of a sliding surface between the water seal and the drum shaft, and enhancing corrosion resistance of the drum shaft.

29. (Currently Amended) The drum type washing machine as claimed in claim 1, further comprising washing fins for increasing friction of the laundry by making the laundry to be hit the washing fins when the laundry is lifted up by the rotation of the drum and fallen down. ~~so that the laundry hits the washing fin to increase friction when the laundry lifted up by the rotation of the drum drops, and making the laundry to move in back and forth.~~

30. (Original) The drum type washing machine as claimed in claim 29, wherein the washing fins at regular intervals on the main surface of the pulsator are formed as one body with the main surface of the pulsator.

31. (Original) The drum type washing machine as claimed in claim 29, wherein the washing fin includes at least one sloped surface with respect to a radial direction, or a circumferential direction of the pulsator.

32. (Original) The drum type washing machine as claimed in claim 29, wherein the main surface of the pulsator has a predetermined curvature.

33. (Original) The drum type washing machine as claimed in claim 29, wherein the washing fins of the pulsator has a maximum height of 5 ~ 15% of an outside diameter of the pulsator.

34. (Original) The drum type washing machine as claimed in claim 1, wherein the pulsator has an outside diameter of around 50 ~ 80% of an inside diameter of the drum.

35. (Original) The drum type washing machine as claimed in claim 1, wherein the drum and the tub have axes tilted by 10 ~ 30° from ground.

36. (Original) The drum type washing machine as claimed in claim 35, further comprising a pulsator rotatably mounted on an inside circumferential surface of the drum.

37. (Original) The drum type washing machine as claimed in claim 1, further comprising a plurality of lifters on the inside circumferential surface of the drum for lifting up the laundry during washing, the lifters spaced away from the pulsator by approx. 30 ~ 90mm.

38. (Original) The drum type washing machine as claimed in claim 1, further comprising auto-balancers mounted on a front and a rear of the drum for reducing vibration in spinning, respectively.

39. (Original) The drum type washing machine as claimed in claim 38, wherein the auto-balancer has a ring shape with a single fluid chamber.

40. (Original) The drum type washing machine as claimed in claim 38, wherein the auto-balancers are arranged to form concentric circles, at least double structured.

41. (Original) The drum type washing machine as claimed in claim 40, wherein the auto-balancer has a height greater than a width.

42. (Original) A drum type washing machine comprising:

a tub of plastic having a wall portion for holding washing water and securing a driving unit thereto, and a front side sloped upward at a predetermined angle from ground;

a drum rotatably mounted in the tub;

lifters on an inside circumferential surface of the drum;

a hollow drum shaft passed through the tub, and connected to the drum inside of the tub for transmission of driving power from a motor to the drum;

at least one bearing for supporting the hollow drum shaft;

a sleeve shaped bearing housing for supporting the bearing;

a stator fixedly secured to the rear wall portion of the tub;

a rotor bushing of an insulating material secured to a rear end of the drum shaft;

a rotor secured to the rotor bushing for transmission of driving force to the drum shaft through the rotor bushing;

a rotor secured to a rear end of the drum shaft to constitute a BLDC motor together with the stator;

a pulsator rotatably mounted on an inside of the drum, having curved shape of washing fins on a main surface thereof;

a pulsator shaft mounted to pass through the hollow of the drum shaft, having a fore end connected to the pulsator;

a pulley positioned in rear of the rotor, and coupled to a rear end of the pulsator shaft, for controlling rotation of the pulsator; and

a braking device including;

a solenoid secured to the tub,

a plunger moving back and forth in the solenoid,

so that the plunger brakes or releases the pulley depending on electric turn on/off of the solenoid, for braking/releasing rotation of the pulsator.

43. (Original) A method for controlling a tilted drum type washing machine, in which rotation of a pulsator in a drum is controlled by braking/releasing a pulsator rotation control pulley, comprising the steps of:

performing washing in a state the pulsator is held; and

performing washing in a state the pulsator is released to rotate freely.

44. (Original) The method as claimed in claim 43, further comprising the step of performing soft washing by controlling an alternating time period of the drum to be a short time in which the laundry does not drop in a state the pulsator is held or released in washing.

45. (Original) The method as claimed in claim 43, further comprising the steps of:

performing spinning in a state the pulsator is held; and

performing spinning in a state the pulsator is released to rotate, freely.

46. (Withdrawn) A drum type washing machine comprising:

a tub of plastic having a wall portion for holding washing water and securing a driving unit thereto, a front side sloped upward at a predetermined angle from ground, a hot air inlet in an upper side of a rear wall, and a hot air outlet in a lower side of a front;

a drum rotatably mounted in the tub, having hot air pass through holes in a rear wall;

a hollow drum shaft passed through the tub, and connected to the drum inside of the tub for transmission of driving power from a motor to the drum;

at least one bearing for supporting the hollow drum shaft; a sleeve shaped bearing housing for supporting the bearing;

a stator fixedly secured to the rear wall portion of the tub; a rotor connected to a rear end of the drum shaft to constitute a motor together with the stator;

a pulsator rotatably mounted in the drum, having hot air supply holes in a main surface thereof; a pulsator shaft mounted to pass through the hollow of the drum shaft, having a fore end connected to the pulsator; pulsator control means for braking/releasing rotation of the rotation of the pulsator;

and hot air supply means for supplying hot air into the drum to dry the laundry in the drum.

47. (Withdrawn) The drum type washing machine as claimed in claim 46, wherein the pulsator control means includes; a pulley in rear of the rotor connected to a rear end of the pulsator shaft, for controlling rotation of the pulsator, and a braking device for controlling rotation of the pulsator in the drum by braking/releasing the pulley.

48. (Withdrawn) The drum type washing machine as claimed in claim 46, wherein the hot air supply holes include a plurality of small diametered hot air supply holes for serving as flow passages to supply hot air into the drum in drying, and preventing damage to the laundry in washing.

49. (Withdrawn) The drum type washing machine as claimed in claim 47, wherein the braking device includes; a solenoid secured to the tub, a plunger moving back and forth in the solenoid, and a compression spring in the solenoid for providing force to move the plunger forward, so that the plunger brakes or releases the pulley depending on electric turn on/off of the solenoid, for braking/releasing rotation of the pulsator.

50. (Withdrawn) The drum type washing machine as claimed in claim 46, wherein the pulsator has an outside diameter of around 50.about.80% of an inside diameter of the drum.

51. (Withdrawn) The drum type washing machine as claimed in claim 46, further comprising a plurality of lifters on the inside circumferential surface of the drum for lifting up the laundry during washing, the lifters spaced away from the pulsator by approx. 30.about.90 mm.

52. (Withdrawn) The drum type washing machine as claimed in claim 46, further comprising auto-balancers mounted on a front and a rear of the drum for reducing vibration in spinning, respectively.

53. (Withdrawn) The drum type washing machine as claimed in claim 46, wherein the hot air supply means includes; a drying duct secured to one side of an upper side of the rear wall of the tub, having a heater and a fan mounted in a flow passage therein, for production and forced supply of hot air, and a condensing duct for removing moist from the hot air discharged through the hot air outlet in a lower portion of the front of the tub.

54. (Withdrawn) A method for controlling a tilted drum type washing machine, in which rotation of a pulsator in a drum is controlled by braking/releasing a pulsator rotation control pulley, comprising the steps of: performing washing in a state the pulsator is released to rotate freely; performing spinning in a state the pulsator is released to rotate freely; and

performing drying in a state the pulsator is released to rotate freely.

55. (Withdrawn) The method as claimed in claim 54, further comprising at least one of the steps of: performing washing in a state the pulsator is held; performing spinning in a state the pulsator is held; and performing drying in a state the pulsator is held.

56. (Withdrawn) The method as claimed in claim 55, further comprising the step of performing soft washing by controlling an alternating time period of the drum to be a short time in which the laundry does not drop in a state the pulsator is held or released in washing.